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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,273	08/02/2005	John Anthony Dunne	93883	2333

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EXAMINER

CROWE, DAVID R

ART UNIT	PAPER NUMBER
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2809

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/527,273

Applicant(s)

DUNNE ET AL.

Examiner

David R. Crowe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/08/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 6 is rejected as being unclear when describing how the filter housing is rotatable. Figure 8 shows housing [10] being bolted to lens supports [44] and [46]. Figure 3 shows housing [10] attached by wire to external control unit [18]. The specification further fails to provide explanation of how [10] rotates to select the required filter.
4. Claim 11 is rejected as being indefinite and unclear in regard to the chambers. As follows from claim 6, it has not been clearly disclosed around which axis the housing rotates in order to determine the location of the chambers. As written the claim requires plural chambers in the housing [10] which as shown in figure 1 only appears to have a single circular groove.
5. Claim 17 is rejected as being unclear in regard to the light of different wavelengths. No mention is made of the light source producing multiple wavelengths for the filters to filter out. The claim does not limit the filters to emitting a range of wavelengths as common in the art but is based on many wavelengths coming into the filter.

6. The term "substantially" in claim 1 and 4 is a relative term, which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: those required to create a focal length from a light source. Further structure is required to form a focal length from any light source.

8. All claims not explicitly listed above are rejected as being dependent on one or more rejected claims.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1,4, 6-8, 19-20, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Avital (WO 00/49334).

11. Claim 1: The prior art anticipates (abstract) a light source [5] which when in operation with a lens has a focal length that is capable of being selected, an aperture [11], a first lens [21], being movable for focusing (adjusting beam width) the light source,

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where as best understood lens [21] is capable of being at the focal point at which location, as common knowledge in the art, would result in the minimum output width.

12. Claim 4: Position of the lens leads to the functional requirement of maximum intensity. Avital inherently anticipates an ability to maximize intensity by having the lens capture the most incident light as possible. That occurs at the focal point where the light is most confined for collection by the lens.

13. Claim 6: Avital teaches a rotatable filter element between the light source and the optics...[that] has various zones. (Page 2 line 31, page 3 line 1) Broadly interpreted each zone can read on a separate filter. The housing is made of the filter wheel [32] and the rotating drive gear from the motor [33].

14. Claim 7 and 8: As best understood, the filter wheel [32] would rotate relative to filter housing part [33] and therefore can be included as the claimed portion that rotates.

15. Claim 19: The rotational axis of the filter housing drive gear is parallel and laterally offset from the longitudinal axis of the light. Said gear constitutes the rotational axis of the filter housing as a whole.

16. Claim 20: The aperture [11] is found is a separate housing from the filter housing as shown in figure 2.

17. Claims 28-30: The prior art anticipates (abstract) a second lens [22] adjustable with the first lens [21] simultaneously and at different linear rates. If the lenses are moving at different linear rates they must be moving relative to one another.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 2, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avital as applied to claim 1.

20. Claims 2,3: Avital discloses the claimed invention except for the f-number between 1.3-1.6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a f-number in that range as the light source is similar to a projector source with f-numbers in the given range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233

21. Claim 5: Avital discloses the claimed invention except for the intensity between 2 and 16 megawatts per meter square. It would have been obvious to one having ordinary skill in the art at the time the invention was made to measure their intensity at the focal point of an arc lamp and arrive at the given range since no details were given on special features used to arrive at these values, and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233

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22. Claims 9-11, 18, 21, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avital as applied to claim 8 in view of Richardson (US 5113332).

23. Claim 9-11 and 18: Avital teaches all limitations of claims 1,6,7,8. Avital fails to teach individual chambers for holding neither the filters nor the arrangement of said chambers. Richardson teaches chambers 282-286 formed in wheel 242. Said chambers are arranged radially offset from the rotational axis of the wheel 242 with said wheel being both the filter housing of claim 10 and the rotating portion of claim 18. It would have been obvious to one of ordinary skill in the art to modify Avital by swapping filter wheel [32] of Avital with wheel [242] of Richardson. By doing so, the claimed rotating portion would have at least one chamber which would then read back on claim 9 in that since the rotating portion is part of the filter housing, if the rotating portion has a chamber then the housing must also have that chamber.

24. Claim 21: Avital teaches all required limitations of claim 6. Avital fails to teach the filter housing integrally formed with the aperture. Richardson teaches chambers with gobos (filters) in a wheel. As best understood an aperture can be any hole, which emits light. There is also no requirement that the invention be limited to one aperture. Therefore if gobos are used as filters of Richardson they inherently have varying apertures formed integrally with the filter housing or wheel, which would be part of the housing. If the gobos were to be replaced by color filters, the entire diameter of the chambers shown would be subject to interpretation as apertures. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention that using a chambered wheel like Richardson, as the rotating part of Avital would result in each

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chamber being a large aperture integrally formed with it where the filter simply covers the aperture. It would have been obvious to call this filter-covered hole an aperture because an aperture is defined commonly as an opening.

25. Claims 24-27: As applied to modified claim 21, Richardson has each aperture, which corresponds to each chamber, of which there is a plurality, spaced radially around the filter wheel. As best understood the aperture can be defined at an cross section of the opening and therefore would allow the aperture to be opposite i.e. found after, the filter with respect to the chamber. Richardson also teaches the use of gobos, which as shown in figure 3 can have a variety of aperture shapes and diameters. It would have been obvious to one of ordinary skill in the art at the time of invention to use the above characteristics of Richardson when modifying Avital for use in claim 21 because of improved versatility in operation.

26. Claims 12-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avital as applied to claim 8 in view of Richardson as applied to claims 9-11 in further view of Leclercq (US 4745531).

27. Claims 12-14: Avital and Richardson fail to teach multiple filter elements. Leclercq teaches 4 filter elements [25] found in a stack [housing 1]. Leclercq shows it was common in the art at the time of invention to use multiple filters in combination. Therefore in view of using Richardson's chambers on Avital's filter wheel it would have been obvious to provide multiple layers in each chamber to allowing preset combination of filter effects. It has also been held that forming in one piece, an article that has

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formerly been formed in two pieces and put together, involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893)

28. Claim 17: As applied after the modification required for claim 12, Avital teaches a filter wheel. Said filter will inherently attempt to filter whatever light is sent through it. Therefore because an arc lamp will provide white light and infrared light [heat] it will go through the filter.

29. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avital as applied to claim 8 in view of Richardson as applied to claims 9-11 in further view of Leclercq as applied to claims 12-14 in further view of Belliveau (US 5758955).

30. The previously cited prior art fails to teach coated filters. Belliveau teaches a filter with a dichroic coating on both sides [column 6, line 60]. Since Belliveau teaches coating both sides it would also read on a coating of at least one side. It would have been obvious to coat the filter to create an improved light field.

Allowable Subject Matter

31. Claims 22-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art fails to teach a recessed portion for accepting the lens in conjunction with the aperture and filter chamber.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rasmussen et al	(US 20030076681)
DelPico et al	(US 20030043461)
Romano et al	(US 20020159262)
Rasmussen et al	(US 20020075685)
Ryan	(US 5188452)
Richardson et al	(US 4891738)
Tyler et al	(US 5060126)
Callahan et al	(US 4894760)
Wheeler et al	(US 4546420)
Wilkinson	(US 3720460).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David R. Crowe whose telephone number is 571-272-9088. The examiner can normally be reached on 7:30AM-5:00PM w/first Friday off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash N. Gandhi can be reached on 571-272-9820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David R Crowe
Examiner
Art Unit 2112

DRC


JAYPRAKASH GANDHI
SUPERVISORY PATENT EXAMINER